

I claim:

- 5 1. A tothing assembly comprising tothing means having two toothed rack means
and a gear defining an axis and arranged to roll along said stationary tothing
means and to pass, during its rolling motion, from one of said toothed rack means
to the other one, wherein a change-over tothing means is provided between said
toothed rack means, said change-over tothing means extending non-smoothly with
10 respect to said toothed rack means to generate a trajectory of the axis of said rolling
gear relative to said tothing means, said trajectory having a discontinuity of its
tangent in a salient point.
- 15 2. A tothing assembly as claimed in claim 1, wherein a relief is provided between
said two toothed rack means to prevent simultaneous contact of said gear with said
two toothed rack means.
- 20 3. A tothing assembly as claimed in claim 2, wherein said change-over tothing
means is a toothed arc convex towards said gear.
- 25 4. A tothing assembly as claimed in claim 3, wherein
- said gear defines a notional reference circle and said two toothed rack means
define notional reference curves, said notional reference circle having
common tangents with each of said reference curves of said two toothed rack
means, when said axis defined by said gear is in said salient point of said
trajectory, and
 - 30 - said convex toothed arc defines a further reference circle, said further
reference circle having a tangent in common with the reference circle of said
gear.

5. A tothing assembly as claimed in claim 2, wherein said change-over tothing means is a linear toothed rack.
- 5 6. A tothing assembly as claimed in claim 2, wherein said change-over tothing means consists of one single tooth.
7. A tothing assembly as claimed in claim 1, wherein said gear, when engaging said change-over tothing means is arranged to leave the engagement with one of said toothed rack means immediately before it engages the other one of said toothed rack means.
- 10 8. A tothing assembly as claimed in claim 1, wherein said reference curves of said two toothed rack means are concave-arcuate.